

Claims

1. A screw for use on hard materials, such as concrete or masonry, having
 - 1.1 a shaft (1),
 - 1.2 a head (3) in the vicinity of one end of its shaft (1),
 - 1.3 a tip (4), and
 - 1.4 a thread (2), wherein cutting teeth on that side of the thread that faces away from the head are alternately inclined to the left and right of its imaginary centerline over their full lengths.
2. A screw according to claim 1, wherein the thread (2) has a sawtooth profile.
3. A screw according to claim 2, wherein the leading edges (6) of the sawteeth (7) are roughly radially disposed with respect to the screw's longitudinal axis (8).
4. A screw according to any of the foregoing claims, wherein the crest of its thread is flattened, forming a narrow face (12).
5. A screw according to any of the foregoing claims, wherein the crest of the thread has edges extending across it.
6. A screw according to any of the foregoing claims, wherein at least one side of its thread has alternating protrusions and notches.
7. A screw according to any of the foregoing claims, wherein at least one side of the thread has roughly radially disposed edges (11, 17).
8. A screw according to any of the foregoing claims, wherein the thread (2) has a row of laterally offset teeth (7) bordering on one another.

9. A screw according to claim 7 or claim 8, wherein the radially disposed edges (11, 17) of the sides (15) of the thread extend all the way down to the screw's shaft (1).
10. A screw according to any of claims 2 - 9, wherein the notches (10) between the teeth (7) do not extend all the way down to the screw's shaft (1).
11. A screw according to any of the foregoing claims, wherein the included angle between the sides (15) of the thread falls within the range extending from around 20° to around 30° over that portion thereof that is supposed to penetrate the wall of a drilled hole.
12. A screw according to any of the foregoing claims, wherein the included angle between the sides (15) of the thread falls within the range extending from around 40° to around 60° over the transition zone immediately adjoining its shaft (1).
13. A screw according to any of claims 2 - 12, wherein the teeth (7) are offset from one another by the width of their face (12).
14. A screw according to any of the foregoing claims, wherein the number of teeth (7) per unit length of thread, and/or the set of the teeth (7), and/or the depths of the notches (10) between the teeth (7) vary/varies over the length of the screw's shaft (1).
